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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,235	12/07/2001	David R. Cheriton	M-9436 US	5820

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EXAMINER

LIM, KRISNA

ART UNIT PAPER NUMBER

2153

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/010,235	Applicant(s) CHERITON, DAVID R.	
	Examiner Krisna Lim	Art Unit 2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-104 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-104 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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1. Claims 1-104 are presented for examination.
2. The disclosure is objected to because of the following informalities:
 - (a) it should be depended on claim 27 instead of claim 8. Appropriate correction is required.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-104 are rejected under 35 U.S.C. 102(e) as being anticipated by Arikawa et al. [6,754,215].
5. Arikawa et al. anticipate (e.g., see Figs. 1-6) the invention substantially as claimed. Taking claim 1 as an exemplary claim, the reference anticipates a method of forwarding packets (e.g., packet scheduling, col. 6, line 9) comprising: storing each one

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of a plurality of packets in one of a plurality of behavioral queues according to a plurality of flow behaviors (e.g., see cols. 7-8); assigning a weighting to said plurality of behavioral queues (e.g., see col. 6, lines 17-49); and forwarding said plurality of packets (the packet scheduling, a packet out part 46 to read packet data from the queue ...) from said plurality of behavioral queues according to said weighting (e.g., see col. 6, lines 20-28).

6. As to claim 2, Arikawa et al. anticipate wherein one of said flow behavior is well behavior flow (efficiently scheduling variable length packet data, col. 1, lines 7-9).

7. As to claim 3, Arikawa et al. anticipate wherein one of said flow behavior is a non-adaptive aggressive flow (optimum to a traffic that requires the real-time performance to guarantee a constant bandwidth, col. 1, lines 26-27).

8. As to claim 4, Arikawa et al. anticipate wherein said weighting is predetermined (e.g., see col. 7, line 15).

9. As to claim 5, Arikawa et al. anticipate wherein said weight is dynamically calculated according to a network traffic condition (e.g., see the abstract, lines 1-4).

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10. As to claim 6, Arikawa et al. anticipate wherein said weighting is based on a proportion of a size (e.g., amount of packet accumulated in each queue, see the abstract, lines 1-6) of said plurality of behavioral queues.

11. As to claim 7, Arikawa et al. anticipate wherein said weighting is based on a data rate of said plurality of packets (e.g., see col. 1, lines 23-45).

12. As to claims 8-9, Arikawa et al. anticipate wherein said plurality of packets is dynamically classified according to said plurality of flow behaviors (e.g., see col. 6, lines 44-49).

13. As to claim 10, Arikawa et al. anticipate wherein said plurality of packets is dynamically classified according to a plurality of predefined packet parameters (priority class, variable length, a weight count value, see col. 6, lines 8-9).

13. As to claim 11, Arikawa et al. anticipate the step of receiving (accumulating) said plurality packets (e.g., see col. 6, line 21).

14. As to claim 12, Arikawa et al. anticipate the step of dropping said plurality of packets if said plurality of behavioral queue is full (weight count value $\leq C_{\max} - 1$) (e.g., see cols. 7-10).

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15. As to claim 13, Arikawa et al. anticipate the step of storing said plurality of packets in a well behavior flow (e.g., see cols. 7-10) if said plurality of packets have said well behaved flow (efficiently scheduling variable length packet data, col. 1, lines 7-9).

16. As to claim 14, Arikawa et al. anticipate the step of forwarding (e.g., see cols. 7-10) said plurality of packets according to said weighting of said well behaved queue (efficiently scheduling variable length packet data, col. 1, lines 7-9).

17. As to claim 15, Arikawa et al. anticipate the step of storing (e.g., see cols. 7-10) said plurality of packets in a non-adaptive aggressive flow (optimum to a traffic that requires the real-time performance to guarantee a constant bandwidth, col. 1, lines 26-27) if said plurality of packets have said non-adaptive aggressive flow.

18. As to claim 16, Arikawa et al. anticipate the step of determining whether said non-adaptive aggressive flow (optimum to a traffic that requires the real-time performance to guarantee a constant bandwidth, col. 1, lines 26-27) has reached a scheduling threshold (the maximum value C_{max} , cols. 7-10).

19. As to claim 17, Arikawa et al. anticipate wherein said scheduling threshold is predetermined (set C_{max} , cols. 7-10).

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20 As to claim 18, Arikawa et al. anticipate wherein said scheduling threshold is dynamically calculated according to a network condition (e.g., see cols. 7-10).

21. As to claim 19, Arikawa et al. anticipate wherein said scheduling threshold is based on size (queue length) of said non-adaptive aggressive flow behavioral queue (e.g., see cols. 7-10).

22. As to claim 20, Arikawa et al. anticipate wherein said scheduling threshold is based on a data rate (control information for transfer control of data packet, col. 6) of said plurality of packets (e.g., cols. 7-10).

23. As to claim 21, Arikawa et al. anticipate the step of determining whether said non-adaptive aggressive flow (optimum to a traffic that requires the real-time performance to guarantee a constant bandwidth, col. 1, lines 26-27) requires adjustment if said non-adaptive aggressive flow behavioral queue has reached a scheduling threshold (the maximum value C_{max} , cols. 7-10).

24. As to claim 22, Arikawa et al. anticipate the step of adjusting said packet forwarding schedule of said non-adaptive aggressive flow (optimum to a traffic that requires the real-time performance to guarantee a constant bandwidth, col. 1, lines 26-27) if said packet forwarding schedule of said non-adaptive aggressive flow behavioral queue requires adjustment (e.g., see cols. 7-10).

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25. As to claim 23, Arikawa et al. anticipate the step of forwarding said plurality of packets (e.g., see cols. 7-10) according to said weight of said non-adaptive aggressive flow (optimum to a traffic that requires the real-time performance to guarantee a constant bandwidth, col. 1, lines 26-27).

26. As to claim 24, Arikawa et al. anticipate wherein said adjusting of said packet forwarding schedule of non-adaptive aggressive flow behavioral queue (optimum to a traffic that requires the real-time performance to guarantee a constant bandwidth, col. 1, lines 26-27) is done according to a predetermined scheme (e.g., see cols. 7-10).

27. As to claim 25, Arikawa et al. anticipate wherein said adjusting of said packet forwarding schedule of non-adaptive aggressive flow behavioral queue (optimum to a traffic that requires the real-time performance to guarantee a constant bandwidth, col. 1, lines 26-27) is done dynamically according to a said network traffic condition (e.g., see the abstract, lines 1-4).

28. As to claim 26, Arikawa et al. anticipate the step of forwarding said plurality of packets (e.g., see cols. 7-10) according to said weight of said non-adaptive aggressive flow (optimum to a traffic that requires the real-time performance to guarantee a constant bandwidth, col. 1, lines 26-27) if said packet forwarding schedule of said non-adaptive aggressive flow behavioral queue does not requires adjustment (e.g., see cols. 7-10).

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29. Claims 27-104 are similar in scope as of claims 1-26, and therefore claims 27-104 are rejected for the same reasons set forth above for claims 1-26. As to the features of a processor, a memory coupled to said processor and a network interface, these features are inherent in any network elements.

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references are cited in the Form PTO-892 for the applicant's review.

A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 U.S.C 133, M.P.E.P 710.02, 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krisna Lim whose telephone number is 571-272-3956 the examiner can normally be reached on Monday to Wednesday and Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess, can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KI

February 15, 2005



KRISNA LIM
PRIMARY EXAMINER